114975

Page 1

March-04-14 3:					1 12	+//.)						
Item ID:	D3391-023				Accept	*N900	0040	7100)* s	etup Star	^t *N	S1*
Revision ID: Item Name:	Mid Tube Asso	embly								Stop	, *N	S2*
Start Date:	07/03/2014	Start Qty		*1*		Cust Item						
Required Date:	07/03/2014	Req'd Q	ty: 1.00	*1*		Customer:						
Reference:									R	lun Star	t ıkı	
Approvals:	Process Pla	n: <u>(</u>		Date: 14:03.	∑ Tooling:	I	ate:			Stop	^IV	H1^
	QC:			Date:	SPC (Y/N):		ate:				*N	R2*
Sequence ID/ Work Center I	D	Operation Description			Set Up/ Run Hours	Tool ID	Tool	# Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr										
D3391	I											
100		Skidtubes			0.00						**	
Skidtubes Skidtubes			Memo 1-Cut tub	oe to finish length as per I	Dwg D3391		\ \	20	14-	4-21		
, y .			2-Drill pi		Do not drill B holes) and o	drill only 1 fwd	<i>)</i> "		,,	, 2(
		<i>\rightarrow</i>	3-Open s	addles and GHW holes to	Ø0.375" exept for fwd sadd	lle hole of detail)					
			4-Remov	ve .030" from Fwd indexii	ng Ridge as per Dwg D3391							
			5-Remov	ve indexing ridge on Fwd	& Aft end of skidtube as per	Dwg D3391	(,			1.		
			6-Debur	r			> 1	DGC _	14	1-4-22	-	
			paint ma	rker,	plate Jig DT8217 Identify Ø 19-20 FROM FWD END OF							
				wearplate holes of D3391 s) as per Dwg D3391	-023 assembly detail section	G-G to Ø0.250"						
			(20 hole	s) as per Dwg D3391	-023 assembly detail section TO WEARPLATE HOLES**							

DQA:			_ Date:													
OA Classide			Date:			WORK ORDER NON-	WORK ORDER NON-CONFORMANCE / UPDATE Work Order update only									
QA Closed:			Date.			T		f			voik order d	date only				
Work Orde	er:					DISPOSITION				AGAINST [DEPARTMENT	/PROCESS				
	•					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering			
Part I	No.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality			
	•					Use-as-is		Therr	noforming	Finishing	Rec/Sto	re/Packaging	Other			
NCR I	No.					Suspected Unapproved			Large Fab	Composite		Supplier				
								<u> </u>		<u> </u>						
Root					Desc	ription of work order update		Initial	Acti		Sign &	_				
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descri	iption	Date	Verification	QC Inspector			
Design																
Doc/Data																
Equip/Tooling	Ш															
Handling/Pre													`			
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Offset/Setup	_								'							
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Landi	na G					General	-A	OLI CA	TEGORI							
Lanui		Bending			<u> </u>	Bend]Folio/F	Program	Г	Outside Dim	ensions [Pressure/Forced			
	-	-	ot Concer	ntric		BOM/Route	H	Grain	rogram	T	Over/Under	<u> </u>	Set-up			
	-	Cracks	or concer	10110		Broken/Damage/Defect		Hardwa	are	<u> </u>	Part Incorre	-	Temperature/Cure			
			nk/Ripple	/Wave		Burrs	<u> </u>	1	ion Incomplete/Un	qualified	Part Lost/M	—	Weld			
	-	Cuffs	,	,		Contamination	\vdash	4 '	tions Incomplete/U		Part Moved	, F	Wrong Stock Pulled			
	$\boldsymbol{\vdash}$	Crushing				Countersink		4	gned/off center	<u> </u>	Positioned V	ت Vrong	-			
	-	Heat Trea			<u> </u>	Cut Too Short	T	Mislab			Power Loss/		Other			
	$\boldsymbol{\vdash}$		n Strip in	Tube		Drawing		Misrea		_						
	-	Marks/Ch	•			Drill Holes	Г	Off-set								
		Turning S	Sequence			Finish		Out of	Calibration							
	П	Wave/Tw	vist in Tub	e		Fit/Function		Out of	Sequence							

Page 2

March-04-14 3:00:00 PM

Item	ID:	D

D3391-023

Accept

N900040100

Setup Start

Run

Stop

Revision ID:

Item Name:

Mid Tube Assembly

07/03/2014

Start Qty: 1.00

1

Cust Item ID:

Customer:

Required Date: 07/03/2014

Req'd Qty: 1.00

1

Date:

Reference:

Approvals:

Start Date:

QC:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Start

Stop

Sequence ID/ **Work Center ID** Operation Description Set Up/ **Run Hours** Tool ID

Tool #

Plan Code Accept Qty

Reject Reject Oty

Insp. Number Stamp

10-Open .375" holes to .438" ***do not open fwd saddle holes***

DGL 14-4-22

11-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

- 12- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previusly drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previusly tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021 D3391-021 BATCH: 114258
- 13- Using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.
- 14- Locating from two fwd wearplate holes in D3391-023 drill remaining 6 wearplte holes in D3391-021 using DT8937
- 15- Open 10 wearplate holes in D3391-021 to 0.297" dia.
- 16- insert D3391-021 into D3391-23
- 17- insert T-pins into first and third fwd saddle holes
- 18- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per
- 19- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499".
- 20-Deburr and blow out all chips from inside tube, scribe batch # in D3391-023 at aft end.

14-4-22

DQA:			Date:			- WORK ORDER MON CONFORMANCE (URDATE								
						WORK ORDER NON-	-CC	ONFO	RMANCE / UPD				AEROSPACE	
QA Closed:			Date:							W	ork Order up	odate only		
Work Orde	er:					DISPOSITION				AGAINST DI	PARTMENT,	/PROCESS		
					_	Rework			Skid-tube	Crosstube	7	Water Jet	Engineering	
Part N	۱o.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality	
					_	Use-as-is		Therr	noforming	Finishing	7	re/Packaging	Other	
NCR N	۰۰۰				_	Suspected Unapproved			Large Fab (Composite]	Supplier		
Root	T	<u> </u>			Descr	ription of work order update		nitial	Action	n	Sign &			
Cause	1	Date	Step	Qty		or non-conformance		ief Eng	Descript		Date	Verification	QC Inspector	
Design			•											
Doc/Data														
Equip/Tooling														
Handling/Pre						,						:		
Material														
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Offset/Setup														
Process							İ		`					
Supplier												•		
Training						•								
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	_	nding				Bend		1	rogram		Outside Dim	-	Pressure/Forced	
	Ce	ntre No	t Concer	ntric		BOM/Route	\vdash	Grain			Over/Under	-	Set-up	
		icks			ļ	Broken/Damage/Defect	_	Hardwa			Part Incorred	-	Temperature/Cure	
			k/Ripple,	/Wave		Burrs	-	l '	ion Incomplete/Unqu	· -	Part Lost/Mi	ssing	Weld	
	Cu					Contamination	-	l	ions Incomplete/Unc	lear	Part Moved	L.	Wrong Stock Pulled	
		ushing				Countersink	_		ned/off center	<u> </u>	Positioned W		٦	
	_	at Treat				Cut Too Short	\vdash	Mislabe		Ĺ	Power Loss/	Surge	Other	
	_	-	Strip in	Tube		Drawing	-	Misread	d					
		rks/Cha			. Ш	Drill Holes	-	Off-set						
	Turning Sequence Finish					Out of Calibration								
	Wave/Twist in Tube				Fit/Function		Out of S	Sequence						

Work Order	ID	114275	5
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Page 3

March-04-14 3:00:00 PM Accept *N900040100* Setup Start D3391-023 Item ID: **Revision ID:** Stop Mid Tube Assembly **Item Name:** *1* **Cust Item ID: Start Date:** Start Oty: 1.00 07/03/2014 **Customer: Required Date:** 07/03/2014 **Reg'd Qty:** 1.00 *1* Reference: Start Run Tooling: Date: Process Plan: Date: Approvals: Stop Date: SPC (Y/N): Date: QC: Tool ID Tool# Plan Accept Reject Reject Insp. Set Up/ Operation Sequence ID/ Qty Qty Number Stamp Code Description **Run Hours Work Center ID** 0.00 QC5- Inspect part completeness to step on W/O 110 *110* QC Memo Quality Control Chemical Conversion Coat per QSI005 4.1 120 *120* 0.00 HandFinish Memo Hand Finishing 0.00 QC7-Inspect Chemical Conversion Coat 1 0 x14/04/ 130 *130* 0.00 QC Memo Quality Control

DQA:		Date:			WORK ORDER NON-CONFORMANCE / UPDATE									
QA Closed:		Date:			WORK ORDER NON	-CC	ONFO	RMANCE / UF		Vork Order uj	ndate only	AEROSPACE		
QA Closed.		Date.					<u> </u>							
Work Orde	er:				DISPOSITION				AGAINST D	EPARTMENT	/PROCESS			
					Rework			Skid-tube	Crosstube	门	Water Jet	Engineering		
Part N	lo.				Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
				_	Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other		
NCR N	lo				Suspected Unapproved			Large Fab	Composite		Supplier			
		T	1							C: 0				
Root	Data.	C+		Desci	ription of work order update		Initial	Acti		Sign &	Varification	OC Inon sets in		
Cause	Date	Step	Qty		or non-conformance	Cn	ief Eng	Descri	ption	Date	Verification	QC Inspector		
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Doc/Data Equip/Tooling														
Handling/Pre														
Material														
Operator														
Offset/Setup														
Process														
Supplier														
Training							·							
Transport														
Unapproved											<u> </u>			
						FAL	ULT CAT	TEGORY						
Landir	ng Gear				General				-			_		
	Bending				Bend	_	1	rogram	1	Outside Dim	⊢	Pressure/Forced		
	Centre N	ot Concer	ntric		BOM/Route	\vdash	Grain		1_	Over/Under	<u> </u>	Set-up		
·	Cracks				Broken/Damage/Defect	L_	Hardwa		L	Part Incorred	}	Temperature/Cure		
	Crimp/Kii	nk/Ripple	/Wave		Burrs		1 '	on Incomplete/Un	· –	Part Lost/Mi	ssing	Weld		
	Cuffs			<u> </u>	Contamination	\vdash	4	ions Incomplete/U	nclear	Part Moved	L_	Wrong Stock Pulled		
	Crushing			<u> </u>	Countersink		4 -	ned/off center	-	Positioned V		Joshan		
-	Heat Trea		- 1		Cut Too Short		Mislabe		L	Power Loss/	Surge	Other		
}	Inspectio	•	Tube		Drawing	\vdash	Misread	I						
}	Marks/Chatter Drill Holes					Off-set Out of Calibration								
}	Turning Sequence			\vdash	Finish	\vdash	ł							
	Wave/Twist in Tube				Fit/Function	ı	Jour or S	equence						

Page 4

March-04-14 3:00:00 PM *N900040100* Setup Start Accept D3391-023 Item ID: **Revision ID:** Stop **Item Name:** Mid Tube Assembly *1* **Cust Item ID: Start Qty: 1.00** 07/03/2014 **Start Date: Customer: Required Date:** 07/03/2014 *1* **Reg'd Oty:** 1.00 Reference: Start Run Date: **Tooling:** Date: Process Plan: Approvals: Stop Date: SPC (Y/N): Date: QC: Reject Tool ID Tool # Plan Reject Insp. Accept Set Up/ **Operation** Sequence ID/ Number Stamp Qty Code **Qty Run Hours** Description **Work Center ID** 0.00 140 Skidtubes *140* 0.00 Skidtubes - DC 14/04/28 Memo 1-Open float bag holes as per dwg Skidtubes 2-C'sink float bag holes as per dwg

3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp: ///// batch#: 12802Z

NOTE: ENSURE WEB IS INSERTED IN AFT END OF TUBE

DAS

150

OC5- Inspect part completeness to step on W/O

0.00

150

OC

Memo

0.00

9 14-04-30

Quality Control

DQA:		_ Date:			WORK ORDER NON-CONFORMANCE / UPDATE								
QA Closed:		Date:			WORK ORDER NON-	-((JNFO	RIVIANCE / UPDATE	W	ork Order up	odate only	AEROSPACE	
Work Orde	r:				DISPOSITION			AGAINS	T DE	PARTMENT	/PROCESS		
Work Orac	' -	****			Rework	ı		Skid-tube Crosstub	e	1	Water Jet	Engineering	
Part N	0.				Scrap			Machining Small Fa	_	Pro	d. Eng. Coor.	Quality	
				_	Use-as-is			noforming Finishin	-	7	re/Packaging	Other	
NCR N	o				Suspected Unapproved			Large Fab Composit	e]	Supplier		
Root	1	T	T	Desci	ription of work order update		Initial	Action		Sign &			
Cause	Date	Step	Qty		or non-conformance	l	ief Eng			Date	Verification	QC Inspector	
Design													
Doc/Data													
Equip/Tooling													
Handling/Pre							*						
Material													
Operator					·,					:			
Offset/Setup													
Process					•			,	•				
Supplier													
Training								·					
Transport	_												
Unapproved						<u> </u>							
						FAL	ULI CA	regory				· · · · · · · · · · · · · · · · · · ·	
Landin F					General		ارداند (د) wa awa na		Outside Dim	ansians [Pressure/Forced	
-	Bending				Bend BOM/Route	Н	Grain	Program	\vdash	Over/Under		Set-up	
-	Cracks	lot Concei	ntric		•	Н	Hardwa		-	Part Incorred		Temperature/Cure	
}		ink/Ripple	////		Broken/Damage/Defect Burrs		1		-	Part Lost/Mi		Weld	
-	Cuffs	ilik) kippie	y wave		Contamination	Inspection Incomplete/Un			<u> </u>	Part Moved	SSILIR	Wrong Stock Pulled	
}	Crushing	,		\vdash	Countersink	Instructions Incomplete/Uncl			\vdash	Positioned W	L ∕rong	Jong Stock i uned	
-	Heat Tre				Cut Too Short	Misaligned/off center Mislabeled				Power Loss/		Other	
}		on Strip in	Tube		Drawing	Misread				1. 04461 2033/			
-	Marks/C	•		<u> </u>	Drill Holes						<u> </u>		
-						H	1	Calibration					
-	Turning Sequence Finish Wave/Twist in Tube Fit/Function					Out of Sequence							

Page 5

Work Ord March-04-14 3	er ID 114 3:00:00 PM	1 275		*114	ツ/5°						1 age 5	
Item ID: Revision ID:	D3391-023			Accept	*N900	040	100)* s	Setup Star Stop		S1*	
Item Name:	Mid Tube Ass	embly							5.0	*N	S2*	
Start Date:	07/03/2014	Start Qty: 1.00	*1*		Cust Item	ID:						
Required Date	: 07/03/2014	Req'd Qty: 1.00	*1*		Customer:							
Reference:							_	R	tun Star	t +81	D1*	
Approvals:	Process Pla	n:	Date:	Tooling:	D	ate:			Stoj	, ~! / !	Hı"	
••	QC:		Date:	SPC (Y/N):	D	ate:			500	*N	R2*	
Sequence ID/ Work Center	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
160		Skidtubes		0.00								
160 Skidtubes				0.00					<u></u> .			
Skidtubes		1-Weld cros 2-grind wel	ssbolt spacer as per dwg d flush – De 14	0.00 D3391 & QSI 004 A/R N	n 128385	BE14-6	94-30					
170		QC10- Inspect visual pe	er QSI004- ground welds	s 0.00 SH							*	
170 QC Quality Control		Memo		0.00 14/5/	& _							
180		QC5- Inspect part comp	oleteness to step on W/C	0.00 /4/5/	6			♦				
1 AO QC Quality Control		Memo		0.00							Of	1

DQA:		Date:		•	WORK ORDER NON-CONFORMANCE / UPDATE									
QA Closed:		Date:			WORK ORDER HOR		J. (1)		Wo	ork Order u	odate only	AEROSPACE		
Work Order	r:				DISPOSITION			AGAINST	ΓDE	PARTMENT	/PROCESS			
TOTA GIGE	' • <u> </u>			_	Rework	ı		Skid-tube Crosstube	,[Water Jet	Engineering		
Part No	0.				Scrap			Machining Small Fab	-	Pro	d. Eng. Coor.	Quality		
				_	Use-as-is			noforming Finishing	_		re/Packaging	Other		
NCR No	0				Suspected Unapproved			Large Fab Composite			Supplier			
Root	<u> </u>	<u> </u>		Desc	ription of work order update		nitial	Action		Sign &				
Cause	Date	Step	Qty	Desci	or non-conformance	i .	ief Eng	Description		Date	Verification	OC Inspector		
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Operator												,		
Offset/Setup														
Process														
Supplier			İ											
Training														
Transport														
Unapproved			<u> </u>											
						FAL	JLT CAT	EGORY		****				
Landing	g Gear				General		•		_		[1		
	Bending				Bend			rogram	\vdash	Outside Dim		Pressure/Forced		
_	Centre No	ot Conce	ntric		BOM/Route	Ш	Grain		-	Over/Under		Set-up Temperature/Cure		
_	Cracks			_	Broken/Damage/Defect		Hardwa		\vdash	Part Incorred	_	Weld		
_	Crimp/Kir	nk/Ripple	/Wave	ļi	Burrs	Ш		on Incomplete/Unqualified	-	Part Lost/Mi	ssing	Wrong Stock Pulled		
<u> </u>	Cuffs			_	Contamination			ions Incomplete/Unclear	\vdash	Part Moved	Vrong	1		
-	Crushing				Countersink			ned/off center	-	Positioned V Power Loss/	T	Other		
<u> </u>	Heat Trea				Cut Too Short	Misiabeled					L			
-	Inspection	•	Tube	<u> </u>	Drawing	Misread								
-	Marks/Ch			<u> </u>	Drill Holes	\vdash	Off-set	Calibration						
	Turning S				Finish	\vdash	l .	Calibration Sequence						
	Wave/Tw	ist in Tub	oe .		Fit/Function									

Page 6

Quality Control

March-04-14 3	1:00:00 PM											=
Item ID:	D3391-023			Accept	*N900	040	100)* s	etup Stai	* *N	S1*	
Revision ID:									Sto			
Item Name:	Mid Tube Ass	embly							500	* * \	S2*	
Start Date:	07/03/2014	Start Qty: 1.00	*1*		Cust Item I	D:						
Required Date		Req'd Qty: 1.00	*1*		Customer:							
Reference:			•					_		4	_	
	Dragona Dla	nn:	Date:	Tooling:	Da	ate:		R	un Sta	"1/	R1*	
Approvals:				SPC (Y/N):	Da	ate:			Sto	*NI	R2*	
	QC:		_ Date									
Sequence ID/ Work Center	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
185		Pressure Wash per QSI0	005 4.3	0.00								
125 HandFinish		Мето		0.00								
Hand Finishing		AND REAL	LODINE AS PER PARC	9-043	·							
190		White Gloss(Ref:4.3.5.1	() per OSI005 4.3-Alum	0.00								
1QO Powdercoat		Memo	,, -	0.00								-
Powder Coating		START TI OVEN TEI FINISH TI	MPERATURE:									
200		QC3- Inspect Part Finis	sh	0.00								
200		Memo		0.00								-

DQA:		Date:			WORK ORDER NON-CONFORMANCE / UPDATE								
QA Closed:		Date:			WORK ORDER NON-	-C(ONFO	RMANCE / UF		Vork Order u	pdate only		AEROSPACE
Work Orde	ar:				DISPOSITION				AGAINST D	EPARTMENT	/PROCESS		
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Part N	lo				Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	\dashv	Engineering Quality
NCR N	lo				Use-as-is Suspected Unapproved		Therr	noforming Large Fab	Finishing Composite	Rec/Sto	re/Packaging Supplier		Other
Root				Desci	ription of work order update		nitial	Acti	on	Sign &			
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descri	ption	Date	Verification	,	QC Inspector
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Doc/Data												ı	
Equip/Tooling													
Handling/Pre													
Material [İ						İ	
Operator													
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Process										ł			
Supplier													
Fraining													
Transport [
Jnapproved													
						FAL	JLT CAT	regory					
Landir	ng Gear				General		_				-		
	Bending				Bend		Folio/P	rogram	L	Outside Dim	ensions	P	ressure/Forced
	Centre No	ot Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	S [,]	et-up
	Cracks				Broken/Damage/Defect		Hardwa	ire		Part Incorre	ci [\T _'	emperature/Cure
[Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Und	qualified	Part Lost/Mi	ssing		Veld
	Cuffs				Contamination		Instruct	ions Incomplete/U	nclear	Part Moved	Ĺ	\^	Vrong Stock Pulled
	Crushing				Countersink		Misalig	ned/off center		Positioned V	Vrong		
[Heat Trea	nt			Cut Too Short		Mislabe	eled		Power Loss/	Surge	0	Other
	Inspection	n Strip in	Tube		Drawing		Misread						
[Marks/Ch	atter			Drill Holes	Off-set							
	Turning Sequence Finish					Out of 0	Calibration						
	Wave/Twist in Tube Fit/Function				Fit/Function		Out of 9	Sequence					

Work Orde		4275		*114	275*							Page 7
Item ID: Revision ID: Item Name:	D3391-023 Mid Tube Ass	sembly		Accept	*N900	040	100)*	Setup	Start Stop	1.71	S1*
Start Date: Required Date:	07/03/2014	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item l Customer:	D:					"IVI	S2*
Approvals:		an:		Tooling: SPC (Y/N):		ate:			Run	Start Stop	^1 <i>V</i> I	R1* R2*
Sequence ID/ Work Center II 230 *230* HandFinish Hand Finishing	D	•	03591-1 spacers using DT erts as per Dwg	Set Up/ Run Hours 0.00 0.00 9416 starting from 0.500" sid	Tool ID	Tool#	Plan Code	Accept	Re Qt		Reject Number	Insp. Stamp
240 *740* QC Quality Control		QC5- Inspect part compl	eteness to step on W/O	0.00								
250 *250 Packaging		Identify as per dwg & St	ock Location:	0.00								

Packaging

DQA:		D	ate: _												
QA Closed:		ח	ate:			WORK ORDER NON-	-CC	ONFO	RMANCE / UP		ork Order up	ndate only	AEROSPACE		
QA Closed.			ate.			<u>.</u>			*************************************						
Work Orde	er:					DISPOSITION				AGAINST DI	PARTMENT	/PROCESS			
	-				_	Rework			Skid-tube	Crosstube	Water Jet		Engineering		
Part N	10.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
				 		Use-as-is		Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other		
NCR N	No.					Suspected Unapproved			Large Fab	Composite]	Supplier	1		
											-				
Root					Descr	iption of work order update		nitial	Actio		Sign &				
Cause	Da	te St	ep	Qty		or non-conformance	Ch	ief Eng	Descrip	otion	Date	Verification	QC Inspector		
Design															
Doc/Data			- 1												
Equip/Tooling															
Handling/Pre			- 1			:									
Material															
Operator		Ī													
Offset/Setup															
Process	_														
Supplier															
Training															
Transport															
Unapproved							<u> </u>				<u> </u>		<u> </u>		
							FAL	ULT CAT	regory			-			
Landir	ng Gear					General		l /a		<u> </u>	7	. —	7/54		
	Bend	_				Bend	-		Program	<u> </u>	Outside Dim	-	Pressure/Forced		
	_	e Not Co	ncen	tric	\vdash	BOM/Route	Щ	Grain			Over/Under		Set-up		
	Crack				\vdash	Broken/Damage/Defect		Hardwa			Part Incorred		Temperature/Cure		
		o/Kink/Ri	pple/	/Wave		Burrs		i	ion Incomplete/Unq	· —	Part Lost/Mi	ssing	Weld		
	Cuffs				-	Contamination	-	i	ions Incomplete/Un	nclear	Part Moved		Wrong Stock Pulled		
	Crush	-			-	Countersink	-		gned/off center	ļ	Positioned W				
}		Treat	: : - -	T. d	H	Cut Too Short		Mislabe		<u>L</u>	Power Loss/	ourge	Other		
		ction Str	-	lube	H	Drawing	-	Misread							
ļ	—	s/Chatte			\vdash	Drill Holes	\vdash	Off-set							
Turning Sequence				Finish	Out of Calibration										
İ	Wave/Twist in Tube					Fit/Function		JOut of S	Sequence						

Work Order ID 114275 *114275* Page 8 March-04-14 3:00:00 PM D3391-023 Accept Item ID: *N900040100* Setup Start **Revision ID:** Stop Mid Tube Assembly **Item Name:** *1* 07/03/2014 Start Qty: 1.00 **Start Date: Cust Item ID:** Req'd Qty: 1.00 **Required Date:** 07/03/2014 *1* **Customer:** Reference: Run Start Date: Tooling: Approvals: Date: Process Plan: Stop Date: SPC (Y/N): QC: Date: Sequence ID/ Operation Set Up/ **Tool ID** Reject Tool # Plan Reject Insp. Accept **Work Center ID** Number Stamp Description Qty **Run Hours** Code Qty 260 QC21- Final Inspection - Work Order Release 0.00

0.00

Memo

260

Quality Control

DQA:			Date:			WORK ORDER NON-CONFORMANCE / UPDATE									
QA Closed:			Date:			WORK ORDER WON		JIALOI	NIVIAINCE / OPDATE	W	ork Order up	odate only	AEROSPACE		
Work Orde	or.					DISPOSITION			AGAINS	T DE	PARTMENT	/PROCESS			
Part N				***		Rework Scrap			Skid-tube Crosstub Machining Small Fa	b	_	Water Jet d. Eng. Coor.	Engineering Quality		
NCR N	No					Use-as-is Suspected Unapproved		inern	noforming Finishin Large Fab Composit	~	Rec/stol	re/Packaging Supplier	Other		
Root					Desci	ription of work order update		nitial	Action		Sign &				
Cause	Da	ate	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector		
Design															
Doc/Data															
Equip/Tooling													•		
Handling/Pre															
Material															
Operator															
Offset/Setup															
Process				:											
Supplier															
Training															
Transport															
Unapproved											.]				
							FAI	ULT CAT	regory						
Landi	ng Gear					General		1 .		_	7	r	-		
	Bend	_				Bend			rogram	<u> </u>	Outside Dim		Pressure/Forced		
	Cent	re Not	Concer	ntric	<u> </u>	BOM/Route		Grain		\vdash	Over/Under	├ ─	Set-up		
	Crac	ks				Broken/Damage/Defect		Hardwa		L	Part Incorred	-	Temperature/Cure		
	Crim	ıp/Kink	/Ripple	/Wave		Burrs		Inspecti	on Incomplete/Unqualified		Part Lost/Mi	ssing	Weld		
	Cuffs				Contamination		í	ions Incomplete/Unclear		Part Moved		Wrong Stock Pulled			
	Crus	hing				Countersink	-	•	ned/off center	\perp	Positioned V		٦		
	Heat	Treat				Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other		
Inspection Strip in Tube				Drawing		Misread	i								
Marks/Chatter				Drill Holes	L.,	Off-set									
Turning Sequence					Finish	Out of Calibration									
Wave/Twist in Tube				_	Fit/Function		Out of Sequence								

Picklist Print

March-04-14 3:00:00 PM

Work Order ID: 114275

114275

Parent Item:

D3391-023

D3391-023

Parent Item Name:

Mid Tube Assembly

Start Date: 07/03/2014

Required Date: 07/03/2014

Start Qty: 1.00

Required Oty: 1.00

Comments:

KJ/EC IPP A05.10.20New Issue IPP B06.02.10ECN773 dwg rev.D EC

IPP C 07.03.20 rev F dwg EC EC IPP D 07.03.28 re-format EC IPP E 07.10.31 ecn 1053P

IPP Rev:F ECN 1056 07-11-13 DD verified by: EC IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC

IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP

Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty	per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100		Manufactured	No			100	Each	85.0000		1	1			
D2500-1-	-100								**					
				Location	<u>1</u>	Loc	Oty	Loc Code						
				HALL			85					=		
					82373 86065		24 61			<u></u>		$\sim N$	8-	14-4-2
D3389-1		Manufactured	No	(30003	140	Each	9.0000		1	1	/ /	90	
*D3389-1 ³	*	Manaractarea							**	·	DC 14	104/2	8	
Web		-		Location	n B114949	Loc	<u>Oty</u>	Loc Code			Ø /	/ /		
				LG	- 1011101		9					<u>-</u>		
					113057		9			_		_		
D3681-1		Manufactured	No			160	Each	176.0000		5	5		0.5	
*D3681-13	*								**	•			BE1	4-04 <i>30</i> 34 <i>4 E</i>
Spacer				Location	n	Loc	Oty	Loc Code				B	11488	34 YE
				LG001	_		176			_				
					108647		40					=		

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DQA: Date:					WORK ORDER NON-CONFORMANCE / UPDATE									
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / UPDATE	Wo	ork Order up	odate only	AEROSPACE		
Mark Orda					DISPOSITION			AGAINST	DE	PARTMENT	/PROCESS			
Work Orde	:r				Down rk	1		Skid-tube Crosstube			Water Jet	Turin conius [
Part N	lo				Rework Scrap		Machining Small Fat				d. Eng. Coor.	Engineering Quality		
NCR N	lo				Use-as-is Suspected Unapproved		Therr	noforming Finishing Large Fab Composite				Other		
Root				Desci	ription of work order update		nitial	Action		Sign &				
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector		
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quip/Tooling														
landling/Pre														
Material														
Operator														
Offset/Setup														
Process									l					
Supplier														
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Jnapproved	•													
						FAI	ULT CAT	regory						
Landir	ng Gear				General		,					_		
	Bending				Bend		Folio/F	Program		Outside Dim	ensions	Pressure/Forced		
	Centre No	ot Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up		
	Cracks				Broken/Damage/Defect		Hardwa	ire		Part Incorred	ાં	Temperature/Cure		
	Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Unqualified		Part Lost/Mi	ssing	Weld		
	Cuffs				Contamination		Instruct	ions Incomplete/Unclear		Part Moved		Wrong Stock Pulled		
Ī	Crushing				Countersink		Misalig	ned/off center		Positioned V	vrong			
	Heat Trea	at			Cut Too Short		Mislabe	eled		Power Loss/S	Surge	Other		
	Inspection	n Strip in	Tube		Drawing		Misread	d						
Ī	Marks/Ch	natter			Drill Holes		Off-set							
Ţ	Turning S	equence			Finish		Out of 0	Calibration						
Wave/Twist in Tube				Fit/Function		Out of 9	Sequence							

March-04-14 3:00:00 PM

Work Order ID: 114275

Parent Item:

D3391-023

Parent Item Name: Mid Tube Assembly

114275

D3391-023

Start Date: 07/03/2014

Required Date: 07/03/2014

Start Qty: 1.00

Required Qty: 1.00

D3591-1

Manufactured

Each

90.0000

2

**

D3591-1

Bushing

Location		L	oc Oty	Loc Code			
FG			10				
	92873		10				
FP001			80				
	100699		5				
	107918		38				
	109107		37				
		230	Each	1,176.000	20	20	

ALS4-1032-130

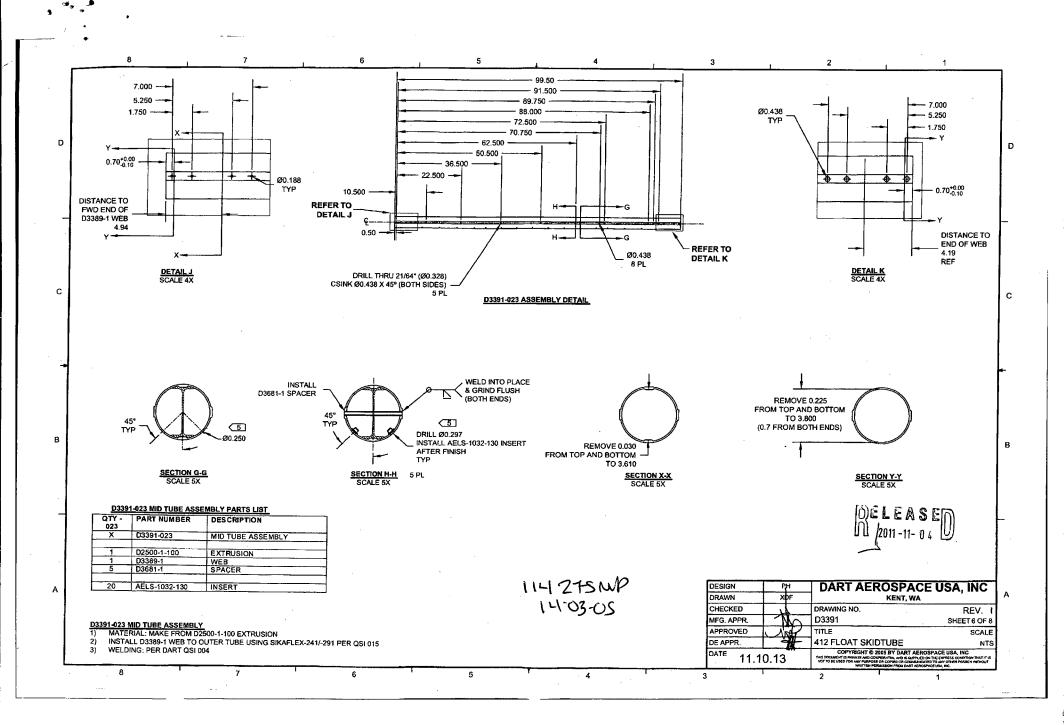
AELS4-1032-130 Purchased

**

AI \$4-1032-130

Location		Loc Oty	Loc Code	
ST279		1119		
	M128179	158		
	M128211	961		
st510		57		
	M126109	57		

DQA:		Dat	e:			TRAGE						
0.4.61		D-4			WORK ORDER NON	-C(ONFO	RMANCE / UPDATE	\A/	ork Ordor w	adata ambi. T	AEROSPACE
QA Closed:		Dat	e:					· · · · · · · · · · · · · · · · · · ·	VV	ork Order u	date only	
Work Orde	er:				DISPOSITION			AGAINST	ΓDE	PARTMENT	/PROCESS	
				<u> </u>	Rework	1		Skid-tube Crosstube		1	Water Jet	Engineering
Part N	lo.				Scrap	1		Machining Small Fat	-	Pro	d. Eng. Coor.	Quality
					Use-as-is	1		noforming Finishing	\vdash	┥	re/Packaging	Other
NCR N	No.				Suspected Unapproved	1		Large Fab Composite	`—	1	Supplier	1
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Root				Desc	ription of work order update	1	Initial	Action		Sign &		
Cause	Dat	e Ste	o Qt	y	or non-conformance	Ch	ief Eng	Description		Date	Verification_	QC Inspector
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						FA	ULT CA	TEGORY				
Landir	ng Gear				General	_	1			1	. –	7_
	Bendi	_			Bend		•	Program	\vdash	Outside Dim		Pressure/Forced
		Not Con	centric		BOM/Route		Grain		-	Over/Under		Set-up
	Crack				Broken/Damage/Defect		Hardwa		\vdash	Part Incorred		Temperature/Cure
	Crimp/Kink/Ripple/Wave			/e	Burrs	<u> </u>	1	ion Incomplete/Unqualified	-	Part Lost/Mi	ssing	Weld
	Cuffs				Contamination		4	tions Incomplete/Unclear		Part Moved	L_	Wrong Stock Pulled
	Crushing				Countersink	<u> </u>	•	gned/off center	<u> </u>	Positioned V		ا
Heat Treat				Cut Too Short		Mislabe	•		Power Loss/	Surge	Other	
Inspection Strip in Tube			<u> </u>	Drawing	<u></u>	Misread						
Marks/Chatter				Drill Holes	<u> </u>	Off-set						
Turning Sequence					Finish	Out of Calibration						
Wave/Twist in Tube					Fit/Function		Out of Sequence					



DQA:			Date:			WORK ORDER NON-CONFORMANCE / UPDATE									ART
QA Closed:			Date:			WORK ORDER NON	-C(ONFO	RMANCE / U		Work Or	ler m	odate only .	7	EROSPACE
QA Closed.			Date.					1			WORK OT	acı u _l	saate only .		
Work Ord	er:					DISPOSITION				AGAINST	DEPARTN	1ENT	/PROCESS		
						Rework	1		Skid-tube	Crosstube			Water Jet	Engine	eering
Part I	No.					Scrap	1		Machining	Small Fab		Pro	d. Eng. Coor.	7 a	uality
			*****			Use-as-is	1	Therr	noforming	Finishing	Re	/Sto	re/Packaging], (Other
* NCR I	Vo.					Suspected Unapproved]		Large Fab	Composite			Supplier		
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Root					Desc	ription of work order update		Initial		ction	Sign			1	
Cause		Date	Step	Qty	-	or non-conformance	Ch	nief Eng	Des	cription	Da	te	Verification	QCI	nspector
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Transport Unapproved				1											
Onapproved	<u> </u>	<u> </u>	<u> </u>				FA	ULT CA	regory		l				
Landi	ng (Gear				General									
	Ŭ	Bending				Bend	Г	Folio/F	Program	[Outsid	e Dim	ensions	Pressure	/Forced
		Centre No	ot Concer	ntric		BOM/Route		Grain	J		Over/l	Jnder	tolerance	Set-up	
		Cracks				Broken/Damage/Defect		Hardwa	ire		Part In	corre	ci 📗	Tempera	ture/Cure
		Crimp/Kir	ık/Ripple	/Wave		Burrs		Inspect	ion Incomplete/(Unqualified	Part Lo	st/Mi	ssing	Weld	
		Cuffs				Contamination	Г	Instruct	tions Incomplete	/Unclear	Part M	oved		Wrong St	ock Pulled
		Crushing				Countersink]Misalig	ned/off center	r [Positio	ned V	Vrong	_ _	
		Heat Trea	t			Cut Too Short		Mislabe	eled		Power	Loss/	Surge	Other	
		Inspection	n Strip in	Tube		Drawing		Misread	d						
		Marks/Ch	atter			Drill Holes		Off-set		•					
		Turning S	equence			Finish		Out of	Calibration						
Wave/Twist in Tube				Fit/Function	1 .	Out of	Sequence								

NCR:	* Yes	/ No		· · · · · · · · · · · · · · · · · · ·		WORK ORDER NON-	coı	NFORI	MANCE / UPE	DATE	DQA: QA Closed:	Date:	14/08/14 14/12/11
Mork Ord	~ ~ .	V () ()	100			DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	•
	۷o.	D'33 NCR	391-0	521		Rework Scrap Use-as-is Work Order Update			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				_ "	1	ption of work order update		nitial	Act		Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
oc/Data quip/Tooling Operator Material Setup Other Process Supplier Training Unapproved	*	14/7/6		1	ALUI ALUI TOU RC. PAR a clean	ER SURFACE. H WAS STOZED IN DINTE/ACID ROOM LONG H WORE NOT KEPT IN AKA/POOR HOUN-KEPT	١	12 12 189	SCRAP. MAND DOS WO ROPM	dry.	14-8-6	14-8-6	DAS 16 9-89
Landir		`~~	· · · · · · · · · · · · · · · · · · ·		Tree	General F	AUL	T CATE	GORY				
Landi		Bending Centre No Cracks Crushed/C Cuffs Heat Treat Inspection Ripples in I Torque Wa	Crimped. Strip in Tend Bend aves in Ex	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instructi Mainte Mislabe Misread Offset Out of C	on incomplete ions incomplete/U nance led	nclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned W Power Loss/S	tolerance :: ssing :: Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other

Outside Dimensions

Wave/Twist in Tube

Folio



Non-Conformance Report

Reviewed						
DQA:					Printed on:	Wednesday, August 06, 2014
Date:		i				
		and the second			e trace to	(1) (1) (1) (2) (2) (2) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
	Ctatus	and the state of the state of the state of	Owner	y diagram antikay hisin dibunahira	Nun	nber
Raised Date	Status	Onen		Forbes, Nigel	1	NCR14-4110
8/6/2014		Open	<u></u>	Torbes, ruger	Sev	erity
Target Date	Standard					MAJOR
8/15/2014	<u> </u>			Audit		
Process	-	tim alim m		Addit		
	Employee 1		inet (Denortm	ent or Supplier)	Fault C	Category
Raised By Person		Raised Aga			" " " "	Maintenance
Downing, Eric	c M		Faci	iity		mamenane.
Details						
was found that gtv x3 I	03391-023	mid tubes had	sever corrosio	n on them, it was o	lue to them be	eing stored in the alodine room
lan a rack right in line of	of the press	sure washer &	wash hose spra	ay, the parts were i	nspected and	placed in the alodine room on
the 15th of may 2014 a	nd the corre	osion was foun	d on them on the	ne 16th of July 2014.		
Keywords				Product		
					D412-742\D	3391-023
Document				Root Cause		
;						
Closed By	Closed D	lato	Resolution			
Closed By	Closed L	ale	Tresolution.			
1						
				No. 4 compare y committee on the committee of the 25 course	ez egő perceptencja: He yez	and the second configurations of the second
					Alle Sales and Alle S	A STATE OF THE STA
ESTATE ARTEST CONTROL OF THE STATE OF THE ST	Owner	See The market services		Closed Date	Closed E	Зу
Target Date	Owner	Forbes, Nig		0,0000 = 110		
8/15/2014		Foldes, Mg	GI .			
Details	<u>, L </u>					
		and the second of the second of the second	and the second of the second o	i je jame vara, ≱tis Nissi i memi	read confinition to a section	
Number	Owner	a kilikan pirkanan da mengila kena	the first of the property of the property of	Target Date		Completed Date
Details	10111101			Response		
1	Downing	Eric M		8/8/2014		8/6/2014
'				TD0004 000 D4455	OG P114275 8	& B115507 are all scrap and
scrap all mid tubes D3:	391-023 an	d have product	tion attempt to	D3391-023 B1155	00, B114273 (D3391-021 B114257, B114259
save the matching fwd	tubes			& B114258 all writ	ten up on the l	back of each w/o
				G D 1 14230 an Will		
2	Forbes,	Nigel		8/15/2014		
}			1			
look into the storing of	the tubes in	n the finishing o	department the			
time the parts are kept	in the depa	artment and fin	u a way to			
protect parts from over	spray of a	cia or other che	enneais	<u> </u>		